THE

ATOMIC

VETERAN

History, Principles and Process

Victoria Anne Cassano, MD, MPH
Captain, MC, USN (RET)
Director, Radiation and Physical Exposures
DEPARTMENT OF VETERANS AFFAIRS
OFFICE OF PUBLIC HEALTH AND ENVIRONMENTAL HAZARDS

“Atomic Veteran”

Applies to:

- Occupation Personnel in Hiroshima or Nagasaki
- Former POWs held within 75 miles of either City
- Participants in Atomic Nuclear Testing

DEFENCE NUCLEAR AGENCY
Report 6030F
August 1982

From 1945 to 1962, the U.S. Government, through the Manhattan Engineer District and its successor agency, the Atomic Energy Commission (AEC), conducted 235 atmospheric nuclear weapons tests in the United States and in the Pacific and Atlantic Oceans.

In all, an estimated 220,000 Department of Defense (DOD) participants, both military and civilian, were present at the tests.

Of these, approximately 90,000 participated in the atmospheric nuclear weapons tests conducted at the Nevada Test Site (NTS), northwest of Las Vegas, Nevada.

FROM DNA Report 6030F August 1982

In 1977, 15 years after the last above-ground nuclear weapons test, the Center for Disease Control noted a possible leukemia cluster among a small group of soldiers present at Shot SMOKY, a test of Operation PLUMBBOB, the series of atmospheric nuclear weapons tests conducted in 1957.

FROM DNA Report 6030F August 1982

Since that initial report by the Center for Disease Control, the Veterans Administration has received a number of claims for medical benefits from former military personnel who believe their health may have been affected by their participation in the weapons testing program.

FROM DNA Report 6030F August 1982

In late 1977, the DOD began a study to provide data to both the Center for Disease Control and the Veterans Administration on potential exposures to ionizing radiation among the military and civilian participants in the atmospheric nuclear tests.

FROM DNA Report 6030F August 1982

The DOD organized an effort to:

- Identify DOD participants in the atmospheric nuclear weapons tests
- Determine the extent of the participants' exposure to ionizing radiation
- Provide public disclosure of information concerning participation by DOD personnel in the atmospheric nuclear weapons tests.

Defense Nuclear Agency Nuclear Weapons Testing Operations

TITLE	DATES	LOCATION
Operation Trinity	1945 – 1946	New Mexico
Operation Crossroads	1946	Pacific
Operation Sandstone	1948	Pacific
Operations Ranger	1951	NTS
Operation Greenhouse	1951	Pacific
Operation Buster-Jangle	1951	NTS
Operation Tumbler-Snapper	1952	NTS
Operation Ivy	1952	Pacific
Operation Upshot-Knothole	1953	NTS
Operation Castle	1954	Pacific
Operation Teapot	1955	NTS
Operation Wigwam	1955	Pacific
Operation Redwing	1956	Pacific
Operation Plumbbob	1957	Pacific
Operation Hardtack I	1958	Pacific
Operation Argus	1958	South Atlantic
Operation Hardtack II	1958	NTS
Operation Dominic I	1962	Pacific
Operation Dominic II,	1962	NTS
Project Gnome and Sedan	1962	NTS
The Plowshare Program	1961 – 1973	NTS, New Mexico, CO

PRINCIPLES
LEGISLATIVE BACKGROUND

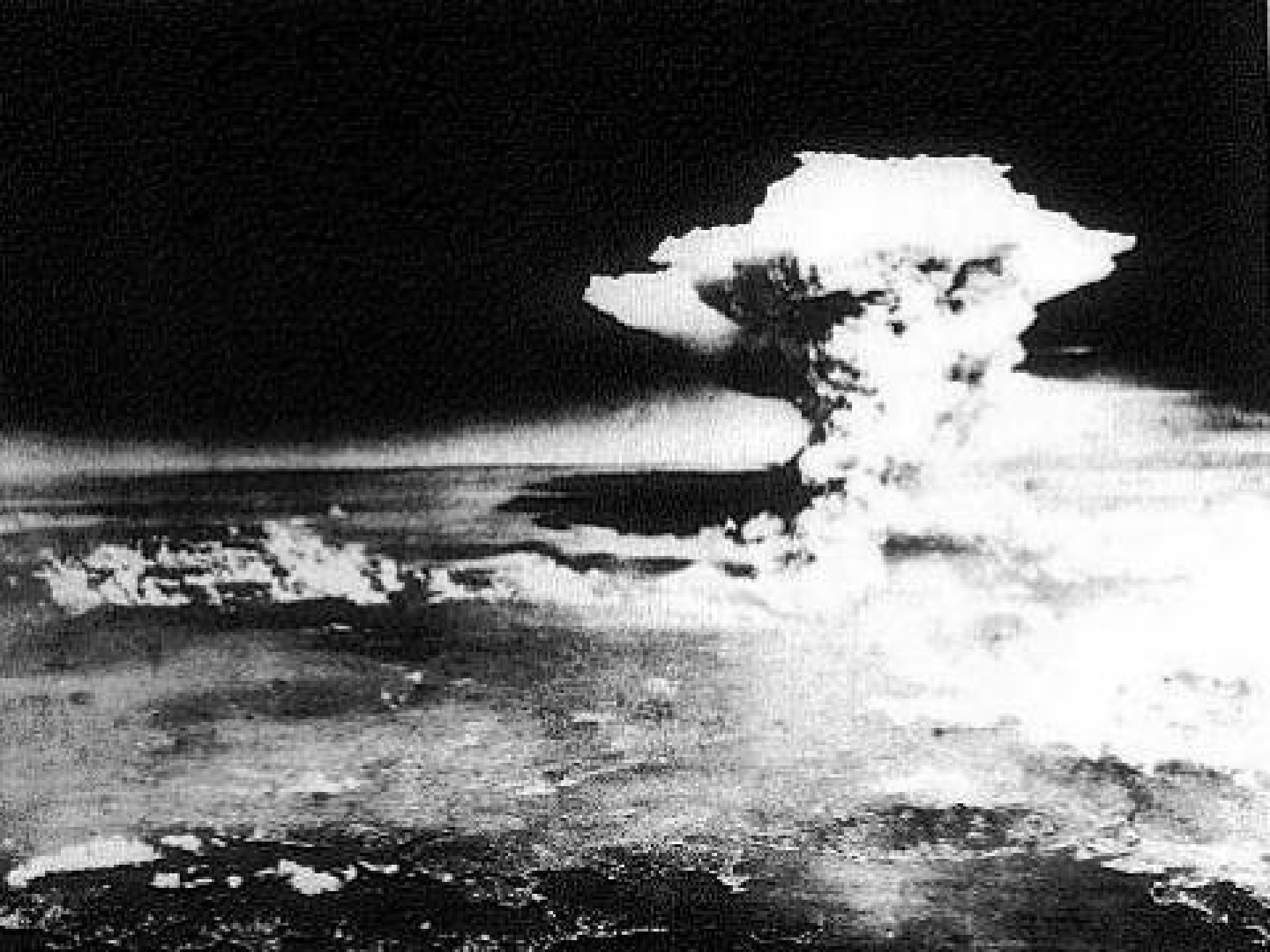
- Pub. L. 98-542 - Veterans' Dioxin and Radiation Exposure Compensation Standards Act (Oct. 24, 1984)
- 38 C.F.R. § 3.311
- Pub. L. 100-321 - Radiation-Exposed Veterans Compensation Act of 1988 (May 20, 1988)
- 38 C.F.R. § 3.309

PRINCIPLES
Public Law 100-321
5/20/88

- Established presumption of service connection
- Defined “radiation-risk activity”
- Periodic reports submitted to Senate and House Veterans’ Affairs Committees
- 38 CFR 3.309(d)

PRINCIPLES
Eligibility

- Onsite participation in a test involving the atmospheric testing of a nuclear device
- Six month post operational period duties on related projects or decontamination
- Present during a total of 250 days before February 1992 on the grounds of a gaseous diffusion plant
  - Paducah, Kentucky
  - Portsmouth, Ohio
  - K25
  - Amchitka Island, Alaska before January 1 1974



PRINCIPLES
Eligibility

- Participation in the Occupation of Nagasaki or Hiroshima, Japan
  - Between August 6 1945 and July 1 1946.
  - Occupation within 10 mile limit
- Internment as a prisoner of war in Japan
  - Within 75 miles of Hiroshima
  - Within 50 miles of Nagasaki
- Repatriation through Hiroshima/ Nagasaki

PRINCIPLES
Presumptive Diagnoses

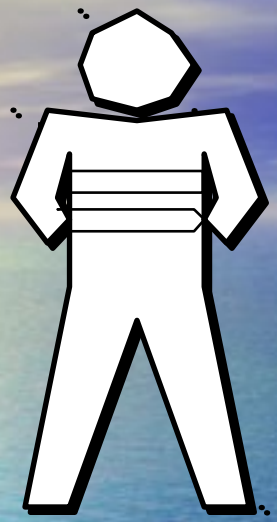
- Leukemia and Lymphomas
  - Excludes CLL
  - Excludes Hodgkin's Disease
  - Includes Multiple Myeloma
- Solid Tumors
  - Thyroid
  - Breast
  - Pharynx
  - Esophagus
  - Stomach and small intestine
  - Pancreas and Gall bladder including bile duct
  - Liver cancer (except if cirrhosis or hepatitis B or C)
  - Salivary glands
  - Urinary tract (excludes genitalia)
- 3/26/02: 5 additional cancers added
  - Brain, Bone, Lung, Colon, & Ovary

PRINCIPLES
Public Law 98-542 10/24/84

- Establish guidelines for resolving claims
- Establish Veterans' Advisory Committee on Environmental Hazards
- Secretary of Defense to prescribe guidelines for preparation of radiation dose estimates
- Establish process for independent dose estimate

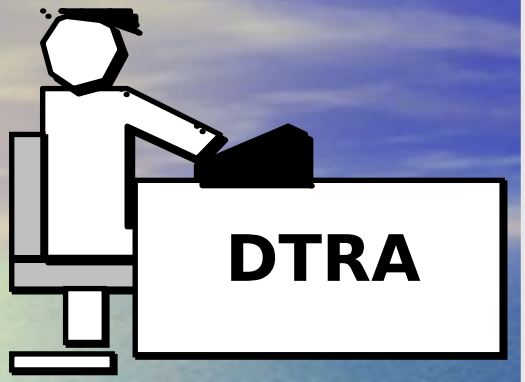
PROCESS

- Presumptive Diagnosis
  - Establish participation
  - Medical Evidence of diagnosis
  - Handled at local VARO
- Non-Presumptive
  - 38 CFR 3.311
  - All cancers included
  - Some non-cancerous conditions included
  - Any disability or disease may be considered if supported by medical or scientific evidence



Veteran files claim with the VA Regional Office (VARO) of the Veterans Benefits Administration (VBA) serving his/her area
All non-presumptive claims are sent through Jackson, MS VARO

Jackson requests documentation of participation and dose from DTRA

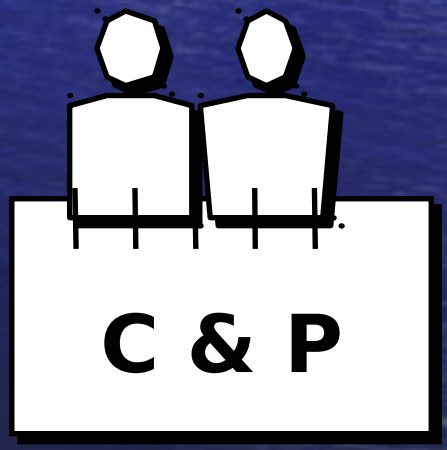


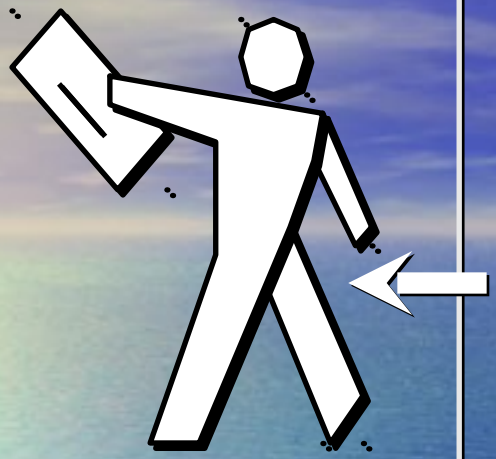
DTRA researches case and responds by letter to Jackson MS VARO with a copy to the veteran when his/her mailing address is known

If DTRA confirms participation and provides a positive dose estimate, VARO submits case to Compensation and Pension (C&P) Service of the VBA in VA Central Office (VACO), Washington, DC for an advisory opinion

OPHEH returns case with a medical opinion to the C&P Service

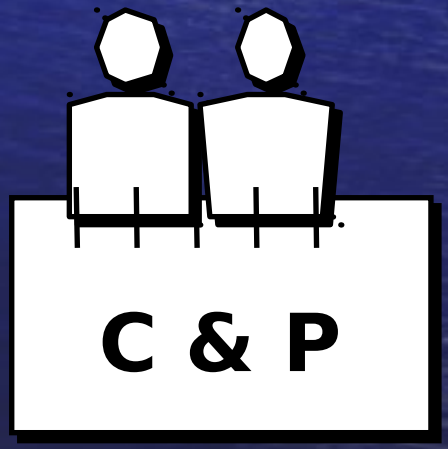
C&P Service refers the case to the Office of Public Health and Environmental Hazards (OPHEH) of the Veterans Health Administration (VHA) in VACO for a medical opinion on the likelihood that radiation was responsible





VARO makes compensation decision and informs veteran

C&P Service reviews the medical opinion and returns case to the VARO with an advisory opinion



PROCESS

- VARO should not refer claims to VACO with a radiation dose estimate prepared by DTRA on or before MAY 8, 2003
- DTRA will no longer automatically return improper requests for dose reconstruction.
- DTRA will contact VACO when additional information or assistance is needed.
- Because…

PROCESS

- Senate hearings in 1998
- GAO was asked to review the Dose Reconstruction process
- Reconstruction process was valid
- No Independent Review Process
- National Research Council (NRC) reviewed the process in 2000
- Report out in 2003

PROCESS

- Average doses are valid
- Individual doses highly uncertain
- Upper bounds of doses to external exposure to gamma radiation underestimated
- Skin and eye doses from Beta particles do not seem to have credible upper bounds
- Skin doses from radioactive particles on skin not taken into account
- 70% of dose reconstructions were in response to Veterans' claims, but most of these are now in the presumptive category

PROCESS
Medical Opinion

- VHACO Office of Public Health and Environmental Hazards
  - Director Radiation and Physical Exposures
  - Health Physicist
- NIOSH IREP Computer Program
  - 99% Confidence Interval that it is as likely as not
  - Used for Cancers only
  - https://www.niosh-irep.com/irep_niosh/
- Non-cancers or those not considered radiogenic
- No dose estimate available

PROCESS

- *Skin cancers* – need specific site(s)
- *Throat cancer* – need specific organ
- *Cataracts* – only one specific type is on the radiogenic list—any other kind requires existence of medical evidence
- *Tumors* – need specific site and evidence of malignancy or radiogenicity (except for brain and central nervous system)
- *Cancers* – need target organ if not obvious from disease type and classification

PROCESS
Determining Radiation Exposure

- DD1141 forms
- Veteran’s service medical records
- Dosimetry offices
- Department of Energy
- Individual nuclear weapons facilities
- Projects - Hanford
- Air Force: Technical Applications Center

PROCESS
Determining Actual Diagnosis

- Hospital discharge summaries
- Operative reports
- Sub-specialty consultations
- Pathology reports
- Death Certificate

Resources

- Victoria Cassano, MD, MPH
  - Victoria.Cassano@va.gov
  - 202-461-7221
- Ionizing radiation registry
  - Helen.Malaskiewicz@va.gov
  - 202-461-7226
- Our Website is being upgraded
  - http://www.publichealth.va.gov/exposures/radiation/index.asp